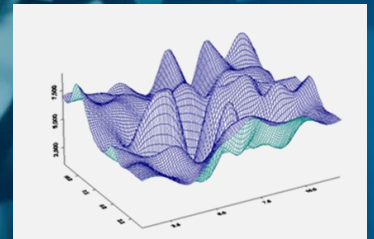


OPTIMIZING ENGINEERING METHODS WITH ISIGHT

SIMULIA COURSE DESCRIPTION



Level: Advanced
Products: Isight
Disciplines: Automation; Design Exploration & Optimization

Audience
 Simulation Analysts, Scientists

Why take this course?

This course provides a brief overview of Isight and optimization before discussing nonlinear optimization theories and applications. Topics such as design space searching, multi-objective optimization, optimization strategy, and multidisciplinary optimization are covered. Attendees will learn key differences between the optimization algorithms offered in Isight, how to choose the preferred method based on the problem, how to remedy issues with run-time performance, and other topics relevant to improving the usage and value of Isight for real engineering optimization problems.

What will you learn?

The topics discussed include the following:

- Design Space Exploration for Optimization problems
- Optimization techniques (Gradient Based, Pattern Methods, Exploratory Methods)
- Multi Objective Optimization
- Nested Exploration and Adaptive DOE
- Exploration techniques (Pointer and Pointer 2)
- Optimization technique selection strategy

Explore Your Learning Options

Live Sessions	Engage in Real-Time, interactive group workshops guided by experts. Learn and collaborate live in your preferred language and time zone.	Join a live session
On-Demand Learning	Access expert-designed courses anytime, anywhere. Perfect for independent learners looking to build skills on their schedule.	Start Learning Now
Private Training	Exclusive, tailor-made sessions designed to meet your team's unique goals with expert guidance.	Contact Us for Custom Training



Gain hands-on experience and master real-world workflows through guided, practical training sessions.

Automate and optimize simulation processes to improve design efficiency and decision quality.

– SIMULIA Training Expert Team

What You Need to Know Before Starting

Introduction to Isight

Agenda for Virtual Live Sessions

Participate in hands-on, real-time workshops where you'll gain practical expertise. Here's what you'll cover:

[Join an Instructor Led Session](#)

Day 1

Lesson 1: Review of Isight
Lesson 2: Overview
Workshop 1: Design Space Exploration
Lesson 3: Exploration and Gradient Based Methods
Workshop 2: Gradient Methods Workshop
Lesson 4: Pattern Methods
Workshop 3: Pattern Methods Workshop
Lesson 5: Single Objective Exploratory Methods
Workshop 4: Exploratory Methods
Lesson 6: Multi Objective Optimization
Workshop 5: Multi Objective Optimization Workshop

Additional Material

Appendix 1: References
Appendix 2: Optimizer Examples
Appendix 3: Optimization Application - Data Matching

Day 2

Lesson 7: Nested Exploration
Workshop 6: Nested Exploration Workshop
Lesson 8: Optimization Selection Strategy
Workshop 7: Optimization Selection Workshop
Lesson 9: Pointer and Exploration
Workshop 8: Expert System Optimization Workshop
Lesson 10: Adaptive DOE
Lesson 11: Multidisciplinary Optimization
Workshop 9: Multidisciplinary Optimization Workshop
Workshop 10: Selecting Functions for Optimization
Lesson 12: Summary

Want to Learn More?

Expand your knowledge by exploring our [course Catalog](#) and browsing learning paths on [Eduspace](#), our dedicated e-learning platform.

Join the Community!

[Join the SIMULIA community](#) to connect, learn, and stay updated.



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